

A method of cleaning a CVD vacuum vessel which has an electrically conductive partition plate which divides an interior of the vacuum vessel into a plasma generating pace and a film-deposition processing space, and in the electrically conductive partition plate there is a plurality of through-holes connecting the plasma generating space to the into the plasma-generating space, the method includes the steps of feeding a cleaning gas into the plasma-generating space; generating active seeds by applying high-frequency electric power to electrodes arranged in the plasma-generating space; feeding the generated active species into the film-deposition processing space through the plurality of through-holes in the electrically conductive partition plate; and cleaning the film-deposition processing space by the active seeds which have been fed into this film-deposition processing space.